



FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
STRATIGIC MONITORING PROGRAM FIELD SHEET

January 2016

PAGE ____ OF ____

Check box if data
qualified

RQ-2016-01-11-38

1/13/2016

Time:

Harney Pond Canal
@ SR70



SD011316-3

Field ID



STORET
26010574

WBID: 3204

Date: _____
(mm/dd/yyyy)

ORG ID: _____

Latitude: _____
(Decimal Degrees)

Longitude: _____
(Decimal Degrees)

Receiving Body of Water: Lake Okechobee

County: grades

Sampling Agency: FDEP South

Sampling Team Members

Ben Paswater
Danny Berger
Chris Link

WQ Measurements	Documentation	Sample Collection	Preservation	Preservation Check
☒	☒	☒	☒	☒
☒	☒	☒	☒	☒
☒	☒	☒	☒	☒
☒	☒	☒	☒	☒

Sampling Equipment

Sample Container: Van Dorn
Dipper: _____
Other: _____
Equipment ID: _____

Collection Method

Wading: ☒
From Shore: ☒
Other: ☒
Via Boat: _____
Canoe/Kayak: _____
Electric Motor: _____
Gasoline Motor: _____

Water Level: Dry / Low / Normal / High / Flooded Matrix: Fresh / Marine / DI

Meter ID# A Photos: Yes / No Tide Falling: Yes / No

Time Zone		Time	Sample Depth (m)	Total Depth (m)	Temp (°C)	DO (mg/L)	DO (%SAT)	COND (µmhos/cm)	Salinity (ppt)	pH	Secchi Disk (m)	
EST	Top	1055	0.3	2.3	17.1	4.5	47	646	-	5.9	0.4	
	Bottom	1056	1.8	2.3	17.1	4.4	46	650	-	6.0		
CST	Blank or Duplicate			Duplicate Field Blank Equipment Blank Equipment ID# <u>26010574</u>								

Biological Samples Collected: None FA SCI LV RBS LVI Other _____

Parameter Suite	Parameter Methods	Preservation
Preserved Nutrients	☒ TKN ☒ TP ☒ NOx ☒ NH3 ☒ TOC ☐ Other _____	<u>H2SO4</u>
Metals	☐ W-ICPMS ☐ W-ICP	HNO3
Filtered Nutrients	☒ oP ☒ Field Filtered 0.45 µm Filter	
Macroinvertebrates	☐ MI-FW-QLDC	Formalin
Microbiology	☐ E Coli ☐ F Coli ☐ Entero ☐ QPCR	
Periphyton	ALGAE-ID	
Pesticides	☐ W-PSNP-TQ ☐ W-PC-AA-SF ☐ W-AHERB-AA ☐ W-UHERB-AA	
Other	☐ All Other Samples Unless Otherwise Noted	
All Samples Placed in Wet Ice ≤ 6° C? <u>Yes</u> / No		

pH of all acidified samples verified to be <2 Yes / No

Sulfuric Acid Lot# Expiration

Nitric Acid Lot# Expiration

Contains
1:1
Sulfuric Acid
SA - 5259020
EXP - 09/16/16
Warning!
See MSDS

Notes:

Place Blank or Duplicate Label Here

Sampler Signatures:

Chris Link *Danny Berger* *Ben Paswater*

Field Parameters Entered into LIMS: _____ Date _____ Field Parameters QC in LIMS: _____ Date _____

DEP-SOP-001/01: Form FD 9000-5
STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION
STREAM/RIVER HABITAT ASSESSMENT FIELD SHEET

RQ-2016-01-11-38

SUBMITTING AGENCY CODE: _____		STORET STATION NUMBER: <u>11/13/2016</u>	 SD011316-3 Field ID  26010574 STORET ID
SUBMITTING AGENCY NAME: _____		Time: _____	
REMARKS: _____	COUNTY: <u>Glades</u>	LOCATION: _____	Harney Pond Canal @ SR70

Habitat Parameter	Optimal	Suboptimal	Marginal	Poor
Primary Habitat Components	Four or more major productive habitats present (snags, tree roots, aquatic vegetation, leaf packs (partially decayed), rock)	Three major productive habitats present. Adequate habitat. Some substrates may be new fall (fresh leaves or snags)	Two major productive habitats present. Less than desirable habitat, frequently disturbed or removed	One or less major productive habitat. Lack of habitat is obvious, substrates unstable or smothered
Substrate Diversity <u>2</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 (2) 1
Substrate Availability <u>2</u>	Greater than 30% major productive habitat present at site 20 19 18 17 16	16% to 30% major productive habitat, by aerial extent 15 14 13 12 11	6% to 15% major productive habitat 10 9 8 7 6	Less than 5% major productive habitat 5 4 3 (2) 1
Water Velocity <u>17</u>	Max. observed at typical transect: > 0.25 m/sec. But < 1 m/sec ≥0.33 0.31 0.29 0.27 >0.25 20 19 18 (17) 16	Max. observed at typical transect: >0.1 to 0.25 m/sec 0.25 0.21 0.17 0.13 >0.1 15 14 13 12 11	Max. observed at typical transect: 0.05 to 0.1 m/sec 0.1 0.09 0.07 0.06 0.05 10 9 8 7 6	Max. observed at typical transect: <0.05 m/sec; or spate occurring: > 1 m/sec <0.05 0.04 0.03 0.01 <0.01 5 4 3 2 1
Habitat Smothering <u>3</u> ----- Primary Score <u>24</u>	Adequate number of stable pools (1-2 per 12 times width) and <25% of habitats affected by sand, silt, or algae. 20 19 18 17 16	Adequate number of stable pools (1-2 per 12 times width) and >25% of habitats affected by sand, silt, or algae. 15 14 13 12 11	Does not have required number of stable pools (1-2 per 12 x width) and/or has shallow pools (<2 x prevailing depth). 10 9 8 7 6	Stable pools are absent. Most habitats affected by sand, silt, or algae accumulation. 5 4 (3) 2 1
Secondary Habitat Components	Expected sinuosity given the stream width. No evidence of dredging or artificial straightening. No spoil banks.	Good sinuosity within old channelized area. Evidence of dredging in the past (>25 yrs) but mostly recovered.	Straightened with trapezoidal cross section, but has a small degree of sinuosity developed within channelized area.	Straightened or engineered by dredging, has trapezoidal or box cut cross section, lacks required pools. May have spoil banks.
Artificial Channelization <u>3</u>	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 (3) 2 1
Bank Stability	Bankfull > 60% of bank height. Slope of bank ≤ 60° from bankfull to top of bank. Bankfull is within or above the root zone with few raw, eroded areas.	Only meets 2 of the 3 requirements for optimal bank stability.	Only meets 1 of the 3 requirements for optimal bank stability.	Bankfull < 60% of bank height. Slope of bank > 60°. Bankfull is below the root zone with raw, eroded areas.
Right Bank <u>4</u> Left Bank <u>4</u>	10 9	8 7 6	5 (4) LR	3 2 1
Riparian Buffer Zone Width	Width of vegetation greater than 18 m	Width of vegetation >12 to 18m	Width of vegetation 6 to 12 m. human activities close to system	Less than 6 m of buffer zone due to intensive human activities LR
Right Bank <u>2</u> Left Bank <u>2</u>	10 9	8 7 6	5 4	3 (2) 1
Riparian Zone Vegetation Quality	Over 80% of riparian surfaces consist of normal, expected plant community for given sunlight & habitat conditions (e.g., native plants; tree, shrub, and forbs represented, if appropriate). Minimal disturbance.	>50% to 80% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Some disruption in community observed.	25% to 50% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). Disruption obvious.	Less than 25% of riparian zone is undisturbed (normal, expected plant community for given sunlight & habitat conditions). LR
Right Bank <u>1</u> Left Bank <u>1</u> ----- Secondary Score <u>17</u>	10 9	8 7 6	5 4	3 2 (1)

41 TOTAL SCORE

Date: <u>1/13/2016</u>	Analyst: <u>Ben Paswater</u>	Signature: <u>Ben Paswater</u>
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1/13/2016

Time:

Harney Pond Canal

@ SR70

SD011316-3

Field ID

STORET

26010574

Date:

1-13-16

Sampler:

BP, CL, DB

100 m: Latitude

27.20852N

Longitude

-81.201290W

0 m: Latitude

27.20765N

Longitude

-81.2023W

Substrates: Code key, draw proportionate habitat abundance.

%



Snags

CL



Roots/undercut banks

0



Leaf Packs (or mats)

0



Aquatic Macrophytes

CL



Pools

total # observed = 0

range expected = 1

Average width

20

m

Average depth

2.3

m

Velocity measured at

0

meter mark.

WQ & chemistry taken at

100

meter mark.

Habitat Smothering:

Note areas (on map) where sand or silt is smothering substrates, limiting habitability.

Bank Stability:

Note areas (on map) with unstable, eroding banks.

Riparian Buffer Width:

Note areas (on map) where natural vegetation is altered or eliminated.

Plants observed / other notes:

Left
Bank

Downstream

Length of grid represents 100 m of stream (not linear meters).
(Horizontal scale is double vertical scale, draw proportionately).

20m

RQ-2016-01-11-38

1/13/2016
Time:

SD011316-3
Field ID #

Waterbody:

Harney

Date: 1/13/16

County: Glades

Time:

Analyst:

BP: H_2O

Signature: _____

**Harney Pond Canal
@ SR70**

STORET
26010574

Comments:

Instructions: Note taxa growing in the water with a checkmark if present, "D" if dominant, and "C" if codominant (dominance only in form of taxa present). Note in the boxes below if no dominant are selected, and note total macrophyte abundance rank for each section. Only the most common taxa are listed, so use blank spaces for additional taxa names.

Process for additional taxa names:																							
HERBACEOUS SPECIES	Meter Mark										Specimen collected (check)	HERBACEOUS SPECIES	Meter Mark										Specimen collected (check)
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100			0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	
Alternanthera philoxeroides				✓			✓	✓	✓	✓		Micranthemum glomeratum											
Bacopa caroliniana												Micranthemum umbrosum											
Bacopa monneri												Myriophyllum aquaticum											
Bidens mitis												Najas guadelupensis											
Boehmeria cylindrica												Nuphar luteum											
Centella asiatica												Orontium aquaticum											
Ceratophyllum demersum												Panicum hemitomon											
Chara												Panicum repens											
Cicuta maculata												Panicum rigidulum											
Cladium jamaicense												Pistia stratioides	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Colocasia esculenta												Polygonum glabra											
Commelina diffusa												Polygonum hydropiperoides											
Commelina virginica												Polygonum punctatum											
Crinum americanum												Pontedaria cordata											
Diodia virginiana												Potamogeton illinoensis											
Eichhornia crassipes												Ruellia simplex											
Eleocharis (wispy viviparous)												Sacciolepis striata											
Hydrilla verticillata												Sagittaria kurziana											
Hydrocotyle sp.												Sagittaria lancifolia											
Hygrophila polysperma												Sagittaria latifolia											
Hymenachne amplexicaulis												Salvinia minima											
Hymenocallis												Samolus parviflora											
Lachnanthes caroliniana												Saururus cernuus											
Landoltia punctata	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		Sparganium americanum											
Lemna												Sphagneticola trilobata (Wedelia)											
Limnophila sessiflora												Typha											
Ludwigia leptocarpa												Urochloa mutica (Brachiaria)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Ludwigia palustris												Vallisneria americana											
Ludwigia peruviana												Zizania aquatica											
Ludwigia repens																							
Luziola fluitans																							
If no Dominant or Co-Dominant were selected, indicate with "X"																							
Indicate % cover macrophytes per section																							
0-5% Macrophyte Coverage	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓												
>5 and ≤10% Macrophyte Coverage																							
>10 and ≤25% Macrophyte Coverage																							
>25 and ≤50% Macrophyte Coverage																							
> 50% Macrophyte Coverage																							

DEP Form FD 9000-3 Physical/Chemical Characterization Field Sheet

RQ-2016-01-11-38

SAMPLE ID see sticker upper right ORG ID 21FLETM
 STORET # see sticker upper right COUNTY Blades
 DATE see sticker upper right TIME _____
 SITE NAME _____

1/13/2016
 Time: _____
 Harney Pond Canal
 @ SR70



FIELD ID/NAME see sticker upper right RECEIVING BODY OF WATER Lake O

RIPARIAN ZONE / STREAM FEATURES

PREDOMINANT LAND-USE IN WATERSHED (specify relative percent in each category): Forest/Natural ☐ Silviculture ☐ Field/Pasture ☐ Agricultural ☐ Residential ☐ Commercial ☐ Industry ☐ Other (Specify) ☐ [] [] [20] [80] [] [] [] []								Landscape Development Intensity Index (LDI) []	
Local Watershed Erosion (select one): ☐ None ☐ Slight ☒ Moderate ☐ Heavy Local Watershed NPS Pollution: ☐ No evidence ☒ Slight ☐ Moderate ☐ Heavy						Typical Width (m) Depth (m)/Velocity (m/sec) Transect [] m wide [0.25] m/s [0.3] m/s [0.25] m/s [1.5] m deep [2.5] m deep [1.5] m deep			
Width of Riparian Vegetation (m) on Each Buffer Side Left Bank: [3] Right Bank: [3]				Hydrologic Modification Score (per FT 3101) []					
High Water Mark: [0.3] + [2.5] = [2.8] (m) (above present water level) (present depth) (above bed)				Artificially Impounded ☒ Yes ☐ No					
Artificially ☐ No ☐ Mostly recovered, more sinuous Channelized: ☒ Some recovery ☐ Recent, severe				Canopy Cover % ☒ Open ☐ Lightly Shaded (11-45%) ☐ Heavily Shaded ☐ Moderate Shaded (46-80%)					

SEDIMENT / SUBSTRATE

Sediment Oils ☒ Absent ☐ Slight ☐ Moderate ☐ Profuse			Sediment Odors ☒ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ Other (Specify): _____			Smothering of Substrates Sand Smothering: None ☐ Slight ☒ Moderate ☐ Severe ☐ Silt Smothering: None ☐ Slight ☒ Moderate ☐ Severe ☐ Algae Smothering: None ☐ Slight ☐ Moderate ☐ Severe ☐		
SUBSTRATE TYPE Assessment Tool: ☐ SCI ☒ RPS ☒ LVS ☐ LCI ☐ BioRecon INVERT PERI % # Times # Times Coverage Sampled Sampled Woody Debris (Snags) [] [] [] Undercut Banks / Roots [] [] [] Leaf Packs or Mat [] [] [] Aquatic Vegetation [] [] [] Rock or Shell Rubble [] [] [] Sand [] [] [] Mud / Muck / Silt [] [] [] Other [] [] [] Other [] [] []			WATER QUALITY Depth (M) Temp. (°C) pH (SU) D.O. (MG/L) D.O. Sat (%) Cond. (UMHO/CM) Salinity (PPT) SECCHI (M) Top: [0.3] [17.1] [5.9] [4.5] [47] [464] [] [0.4] Mid: [] [] [] [] [] [] [] [] Bottom: [1.8] [17.1] [6.0] [4.1] [46] [650] [] [] Meter ID: [A] TOTAL DEPTH [2.3]					
Water Odors Normal ☒ Petroleum ☐ Sewage ☐ Chemical ☐ Other ☐			Water Surface Oils Normal ☐ Sheen ☒ Globs ☐ Slick ☐ Other ☐			Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ Exp: _____		
Water Sample Taken? ☒ Yes ☐ No Sample Preserved? ☒ Yes ☐ No Lot Number: _____ Exp: _____			Color Tannic ☒ Green (Algae) ☐ Clear ☐ Other (Specify) ☐			Clarity Clear ☐ Slightly Turbid ☒ Turbid ☐ Opaque ☐		
ABUNDANCE Not Obs. Rare Common Abundant Periphyton: ☒ ☒ ☐ ☐ Fish: ☒ ☐ ☐ ☐ Aquatic Plants: ☐ ☒ ☐ ☐ Iron/Sulfur Bacteria: ☒ ☐ ☐ ☐			System Type: Stream ☐ Lake ☐ Wetland ☐ Estuary ☐ Other (Specify) ☒ <u>canal</u>					
AMBIENT FIELD CONDITIONS / NOTES: ☒ The antecedent hydrologic conditions have been met to my best knowledge.								
SAMPLING TEAM <u>Ben Paswater, Chris Link, Danny Berger</u>					SIGNATURE: <u>Ben Paswater</u>		DATE: <u>1/13/16</u>	

DEP FORM FD 9000-25 Rapid Periphyton Survey Field Sheet

RQ-2016-01-11-38



County: Grades Investigators: Ben Paswater

1/13/2016

Time:

Harney Pond Canal
@ SR70

SD011316-3

Field ID

STORET

26010574

Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover	Transect (m)	Point 1=right 9=left	Algal Thickness Rank (N-6, X)	Estimated	Canopy Cover
0	1	X			60	1	N		
	2	N				2	N		
	3					3			
	4					4			
	5			0		5			0
	6					6			
	7					7			
	8					8			
	9					9			
10	1	N			70	1	X		
	2	N				2	X		
	3					3			
	4					4			
	5			0		5			0
	6					6			
	7					7			
	8					8			
	9					9			
20	1	N			80	1	N		
	2	N				2	N		
	3					3			
	4					4			
	5			0		5			0
	6					6			
	7					7			
	8					8			
	9					9			
30	1	N			90	1	N		
	2	N				2	N		
	3					3			
	4					4			
	5			0		5			0
	6					6			
	7					7			
	8					8			
	9					9			
40	1	N			100	1	X		
	2	N				2	N		
	3					3			
	4					4			
	5			0		5			0
	6					6			
	7					7			
	8					8			
	9					9			
50	1	N				1			
	2					2			
	3					3			
	4					4			
	5			0		5			0
	6					6			
	7					7			
	8					8			
	9					9			

Secchi depth
Estimated? ND

points ranked 4-6 0
total points assessed 9
% points ranked 4-6 0

Check accompanying data collected at same site/date.

Algal mat sample ☐
Linear Veg Survey ☒
Habitat Assessment ☒
SCI/Biorecon ☐
Water sample ☒

RQ-2016-01-11-38

Algal Thickness Rank

N	rough, no algae, slimy, algae up to 1mm
3	>1mm - 6mm
4	>6mm - 20mm
5	>20mm - 10 cm
6	>10 cm

Record "N" and check "Estimated" for points deeper than the Secchi depth; algae are presumed absent. Check "Estimated" if thickness estimated for deep points which can be seen but not reached.

Record "X" for points shallower than Secchi depth for which substrate cannot be seen or reached with the hand. No estimated rank.

Record canopy cover as the number of small densiometer quadrants (out of 96) that HAVE canopy cover. Measure facing upstream at point 4, 5, or 6.

Collect algal mat sample following DEP SOP FS 7240 if the percentage of total sampled points with a thickness rank of 4, 5, or 6 is >20%.